

HEAD RELATIONAL TRANSFER FUNCTION VIRTUALIZER

ABSTRACT

5 Sound and the spatial location of the sound relative to a microphone array are sensed and derived respectively and transmitted to a sound reproducing system that uses the sound as a monaural stream and shapes the monaural stream according to channels using time delays, attenuation, reverberation, and filters that represent head-related transfer functions (HRTFs) where each HRTF has coefficients that are functions of spatial location,

10 particularly one or both angles of incidence. This invention in some embodiments provides for acoustical images of a speaker moving relative to the microphone array and in other embodiments provides for adjustments in a listener's HRTF database derived from sounds from the listener.